A STUDY ON DEVELOPMENT OF INVESTOR CONFIDENCE INDEX FOR MUTUAL FUNDS IN INDIA

A

SYNOPSIS

Submitted for the registration to the degree of

Doctor of Philosophy (Ph. D)

RESEARCHER

Priyank Kulshreshtha

SUPERVISOR:

Prof. K. Santi Swarup

CO SUPERVISOR:

Prof. Swami Prasad Saxena

Department of Management

Faculty of Social Sciences

Dayalbagh Educational Institutions (Deemed University)

DAYALBAGH AGRA – 282005

1. INTRODUCTION

Early theory of finance claimed the investor to be rational and calculative but over the period of time markets have seen so many incidents like Great crash of 1929, the Tronics boom of early 1960s, the Nifty-fifty bubble of the early 1970's, and the Internet.com bubble of 1990s which evident the irrational behavior of investors thus over a period of time many researcher studied the role of irrationality in the various markets' performance. During these studies researchers found out that majority of investors used to be sentiment driven and thus make irrational choices which challenge the well-established theories of finance.

When Adam Smith defined economics he explained the supremacy of money in human life which was then criticized but now has started gaining prominence again. It explains that humans attach more importance to money rather than anything else. Now if money is so important to an individual, it becomes obvious for him to be cautious and worried about its safety and thus people do not like to hand over their money to an unknown agency with the purpose of returns. But in today's world people are doing that, they are handling over their money to various industries from Banking to Insurance and even in the share market (considered to be as the most risky investment avenue). This ignites the question that how people are willfully giving their most loving, hardly earned, well preserved thing in the hands of unknown people? The answer is confidence which provides the strength and courage to bear risk amongst people. Confidence is the key of any financial exchange. If there is no or less confidence it become impossible to initiate and if initiated to continue such exchange. Confidence building is a continuous process. There are various factors like past performance, environmental factors, growth prospects, and regular disclosures etc. that affect the confidence and get affected in turn by the confidence too.

To build up this confidence, there are various financial intermediaries run in the market having a formal setup duly approved by Government. Some of these intermediaries are Banking, Insurance, non- banking finance corporations etc. One of such emerging intermediary is mutual fund industry. It is the youngest but

the most vibrant industry having assets under management $360.90 billion (INR23.26 lakh crore) as on April 2018[1]

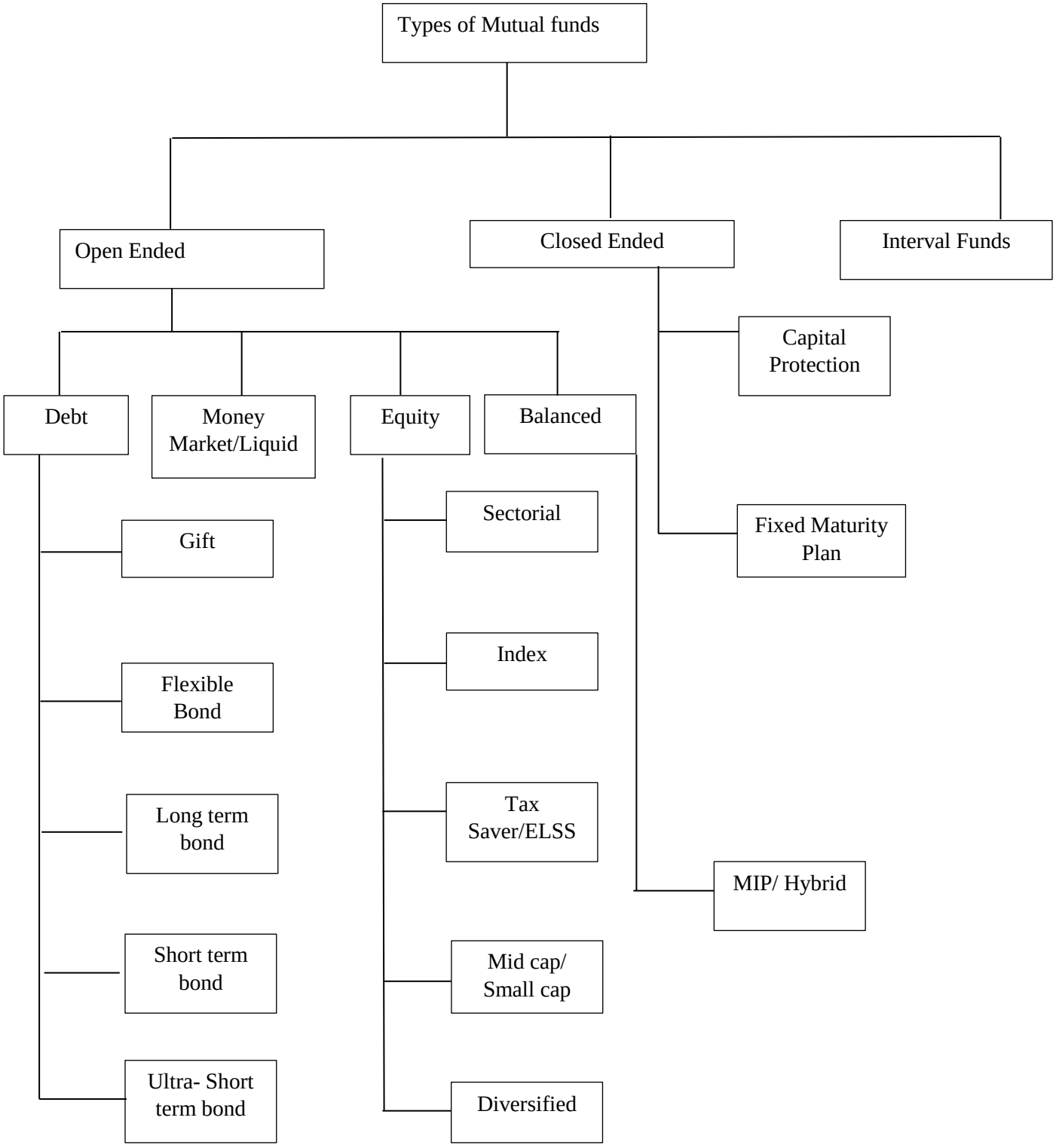
1.1 MEANING OF MUTUAL FUND

A mutual fund is an investment vehicle formed by collecting money from many investors for the purpose of investing it in varied kind of investment avenues like stocks, bonds, money market instruments and other assets. Mutual funds are operated by professional money managers who invest the money in various asset classes with a view to have income or capital gains for investors. The portfolio of mutual funds is to be very structurally maintained in line with the pre stated objectives in prospectus.

Diversification is the key of all investments by mutual funds. A well- diversified fund can mitigate the risk up to a significant level but diversification cannot eliminate the risk completely. A well- diversified portfolio can generate better results at a much reduced risk but a certain percentage of risk content will always present and this is applicable to all investment avenues. This is the systematic risk for a portfolio or fund.

[1] www.ibef.org

1.2 YPES OF MUTUAL FUNDS



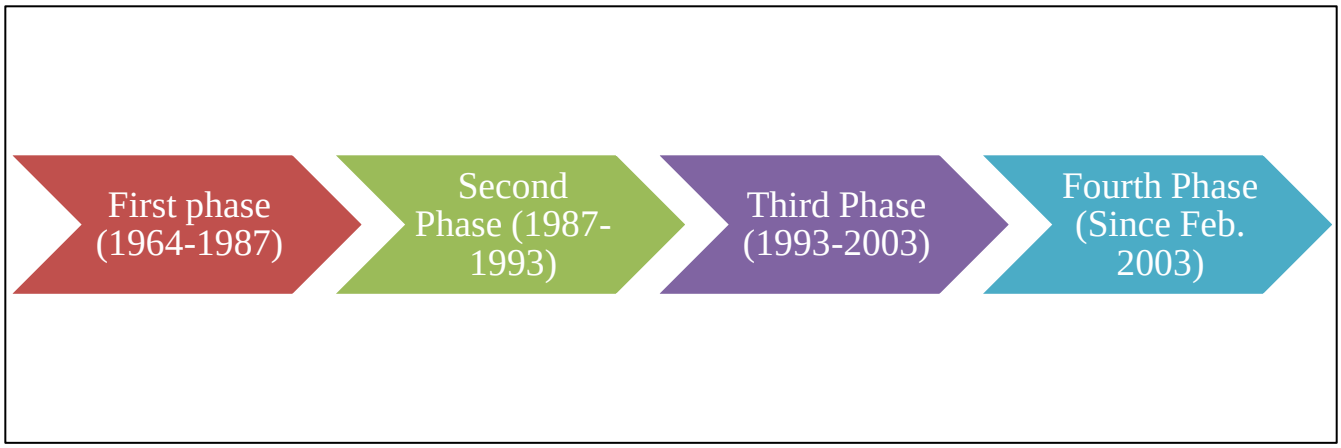
[2]Sadhak H. (2003) *Mutual Funds in India* New Delhi Sage Publications Pvt. Ltd

- **Open ended mutual fund:** Open ended mutual funds are investment options having no fixed maturity time. Investors can buy or sell units at any point of time.
- **Debt/Income:** Under debt scheme major portion of investable fund is invested in debentures, bonds, government securities and other debt instruments. These investment avenues carry less risk and thus less return.
- **Money market/Liquid:** Money market or liquid funds are such funds where money is invested in short term debt instrument to seek reasonable returns.
- **Equity/Growth:** It is the most popular type of mutual funds which gives return in long term. Such types of mutual funds carry high risk and are advised to be hold for a longer period of time for good capital appreciation.
- **Index scheme:** It is a source of passive investment strategy which replicates the movement of benchmark index. It is a most popular concept in west.
- **Sectorial Scheme:** These funds are invested in specific sectors like banking, Insurance Infrastructure, Information and Technology etc. and in various schemes of capital market like large cap, mid cap etc. These schemes provide relatively high risk return opportunity in equity segment.
- **Tax Saving:** This scheme goes according to its name and provides tax benefits to the investors. It used to have a lock in period of 3 years and because it is invested in equities, provide long term growth opportunities.
- **Balanced funds:** Balanced funds provide an opportunity to earn regular income as well as growth because of its portfolio which comprises both equity and fixed income securities. The ratio used to be predetermined and disclosed in the scheme related offer document.
- **Closed Ended mutual funds:** Such mutual funds schemes used to have a stipulated maturity period and one can only invest in it at the time of launch of this scheme known as NFO (New fund offer). These are listed on a stock exchange.

- **Capital protection. This** fund aims at protecting principal amount of investment and providing reasonable returns. These funds invest major proportion of their portfolio in high quality fixed income security and keep marginal exposure to equity.
- **Fixed maturity plan:** FMPs, as the name suggests, are mutual fund schemes with a defined maturity period. These schemes normally comprise of debt instruments which mature in line with the maturity of the scheme, thereby earning through the interest component (also called coupons) of the securities in the portfolio. FMPs are normally passively managed, i.e. there is no active trading of debt instruments in the portfolio. The expenses which are charged to the scheme, are hence, generally lower than actively managed schemes.
- **Interval:** Operating as a combination of open and closed ended schemes, it allows investors to trade units at pre-defined intervals

1.3 HISTORY OF MUTUAL FUND INDUSTRY

History of mutual funds can be divided into four phases



- **First Phase (1964-1967):** Unit trust of India established in 1963 by an act of parliament. Initially it was set up and regulated by Regulatory and administrative control of Reserve Bank of India. In 1978 it delinked form from Reserve Bank of India and Industrial Development Bank of India took the

regulatory and administrative control. Unit trust of India launched its first scheme in name of Unit Scheme in 1964. By the end of 1988 UTI had Assets under management of Rs. 6,700 crore[2]

- **Second Phase (1987-1993):** Second phase is also known as the phase of entry of non UTI public sector mutual funds. In this time frame Indian banking and Insurance industry tried to participate for the first time. Public sector banks, Life Insurance Corporation and General Insurance Corporation launched their mutual funds at various points of time. State Bank of India mutual fund was the first non UTI mutual fund which got established in June 1987. After that CANBAN mutual fund (December 1987), Punjab National Bank Mutual fund (August 1989), Indian Bank mutual fund (November 1989), Bank of India mutual fund (June, 90) and Bank of Baroda Mutual fund (October 1992) got established. Life Insurance Corporation and General Insurance Corporation brought their mutual funds in June 1989 and December 1990 respectively. By the end of 1999 assets under management was Rs.47004 crore.
- **Third Phase (1993-2003- Entry of private sector funds):** Private sector entered in Mutual funds industry in 1993. IN the same year first mutual fund regulation came into force under which all mutual funds except Unit Trust of India were required to be registered and governed. The erstwhile Kothari pioneer (now merged with Franklin Templeton) was the first private sector mutual fund which got registered in July 1993. In 1996 SEBI regulation 1993 were substituted by a more exhaustive and revised mutual fund regulations 1996. By the end of January 2003 there were 33 mutual funds with Rs. 1,21,805 crore assets under management whereas UTI alone was having RS. 44541 crore assets under management.
- **Fourth Phase (since February 2003):** On February 1, 2003 Unit Trust of India Act got repelled and following that repulsion Unit Trust of India bifurcated into two separate entities. First became specified undertaking of Unit Trust of India having assets under management of Rs. 29,835 crores at the end of January 2003. This specified unit of UTI works under an administrator according to the rules framed by Government of India. It does not come under the ambit of Mutual fund regulations.

[2] www.amfi.com

The second entity is UTI mutual funds, sponsored by State Bank of India, Punjab National Bank, Bank of Baroda and Life Insurance Corporation. This entity comes under the mutual fund regulations and it is registered with SEBI.

1.4 STRUCTURE OF MUTUAL FUNDS IN INDIA

In India mutual fund industry is highly regulated by agencies with an aim to incorporate operational transparency to protect investor's interest. SEBI determines the structure of mutual fund industry. According to SEBI all these funds are required to be established under Indian Trust Act, 1882 in the form of trust.

A mutual fund operates through a four tier structure. The four parties that are required to be involved are a sponsor, Board of Trustees, an asset management company and a custodian.

- **Sponsor:** A sponsor is a body corporate who establishes a mutual fund. Sponsor can be an individual or in conjunction with other corporate body. A sponsor is required to contribute at least 40% net worth of AMC, in other words if any person holds minimum 40% or more net worth of the Asset management company would be required to qualify as sponsor as per criteria specified by mutual fund regulations.
- **Board of trustees:** Every mutual fund company is required to have an independent board of trustees which comprises of two third such members who are not connected with sponsor in any way. Board of trustees hold the property of mutual funds for the benefit of unit holders. Boards of directors are responsible for protecting unit holder's interest.
- **Asset Management Company:** Asset Management Company (AMC) plays a vital role in mutual fund operations. Such companies work as investment managers who invest the investor's money in various investment avenues like shares, debentures, bonds and money market instruments etc. These AMCs do intense research of market situations and conditions of financial performance of various companies with a view to generate returns more than average market returns. These companies also perform administrative tasks related to mutual funds.

- **Custodian:** The mutual fund is required by law to protect their portfolio securities by placing them with a custodian. Nearly all mutual funds use qualified bank custodians. Only a registered custodian under the SEBI regulation can act as a custodian to a mutual fund.

1.5 ADVANTAGES OF MUTUAL FUNDS

As discussed earlier that mutual funds have gained the popularity over a period of time because of its simplicity and comforting nature. The major reason behind the popularity of this investment avenue is because it facilitates people who are interested in share market but cannot manage their investment due to limited knowledge time and money and still can get good results.

There are following advantages of mutual funds.

1.5.1 **Economies of scale:** Economies of scale can be understood as the benefit derived due to mass activity be it production, sales or purchase. Mutual fund comprises this benefit because of its voluminous transactions from the pool of money collected from retail (small) investor. In this industry, transactions of large volume facilitate investor in the form of low transaction cost and less commission charges.

1.5.2 **Diversification:** It is well known saying in finance is no one should put all eggs in one basket. This implies that investments should not be concentrated in one particular avenue but it should be diversified in various avenues. It is advised because diversification helps in mitigating the risk by distributing it to entire portfolio. When we look at mutual fund industry we find this advantage evidently because various qualified fund managers construct the portfolio of various schemes thus include diversification as a prominent feature of this industry. Fund managers diversify their portfolio across the sectors as well as within the sector.

1.5.3 **Liquidity:** The term liquidity refers to the turning out ability of investments in cash as and when required. Mutual funds are also considered as a liquid investment option because of easy exit options provided by companies. In this investment option an investor can quit at any point of time with utmost ease. However an exit load fees usually charged from the investor which makes it less liquid

for few of the investor class but if mutual funds are compared with other investment options like fixed deposits, recurring deposit or any other investment alternative in post office investor will realize that mutual funds are more liquid.

1.5.4 **Divisibility:** When people invest in capital market they require sufficient money to buy a round lot of shares whereas in case of mutual funds people can start their investment with minimum amount for small denominations. This small amount encourages investors to make periodic investments so that over a period of time they can get good returns on their accumulated wealth

1.5.5 **Professional management:** Schemes of mutual funds are being constructed and managed by a qualified man known as fund manager of the company. He uses his discretion on the basis of his knowledge, experience and abilities to trade in the market. So investors of mutual funds who lacks in proper knowledge of market, get their funds professionally managed.

1.6 DISADVANTAGES OF MUTUAL FUNDS:

1.6.1 **Fluctuating returns:** Mutual fund is a derived fund which generates returns on the basis of the performance of the share market. This is the core reason that mutual funds never guarantee fixed returns and its returns keep on varying depending upon the market situations. Returns may go up or down.

1.6.2 **Availability of cash:** For providing liquidity option to their investors all asset management companies are required to keep huge amount of ready cash. This availability results in locking of funds with no returns.

1.6.3 **Diworsification:** This is the stage where asset managers over complicate their funds by overly diversifying it and thus gets exposed to market risk more Also, many fund managers try to keep their portfolios restricted to particular sector which again increases risks of these portfolios.

So while mutual funds have the potential to offer benefits like economies of scale, diversification, liquidity, divisibility and professional management, they may also result in fluctuating, illiquid, and overly diversified

portfolios. So it is important to understand and study investors' confidence in this industry for its future growth potential

This study aims to measure investors' confidence by constructing investors' confidence index for mutual funds.

2. REVIEW OF LITERATURE

2.1 LITERATURE RELATED TO STUDY OF PERCEPTION FOR MUTUAL FUNDS

2.1.1 Khurshid Rizwana 2016 in her paper titled Investors perception and behavior towards mutual funds as an investment option had talked about various factors affecting perception of mutual funds by conducting primary survey on 300 respondents and found that age, income, occupation etc. affect the perception of investors towards mutual funds.

2.1.2 Rehan Raja, Naz Saba et al. (2018) in their paper titled Awareness and Perception of Investors towards Mutual Funds Industry had talked about the impact of various demographic factors' on the investors' perception in Pakistan by conducting a primary survey on 150 respondents and found that different demographic factors such as age and education level play a significant role in increasing the awareness of investors about the investment options. Whereas the factors like transparency, fund's reputation and risk management are involved in shaping the investor's perception.

2.1.3 Udayshankar R. and Maran K(2018) in their paper titled Mutual fund investor's perception in India- a study had talked about various factors affecting perception of investors' regarding mutual fund by collecting primary response from 150 respondents and found that rate of the return is the first important factor followed by brokerage and low risk and it is also found out that there exists high degree of correlation between level of customer's satisfaction on the mutual fund investments.

2.1.4 Malhotra D. K. and McLeod Robert W(1997) in their paper titled An empirical analysis of mutual fund expenses conducted an empirical analysis of various expenses and management fees related to mutual funds by selecting various equity and bond funds. Researcher found that expense conscious investors, interested in equity funds should consider existence of 12b-1 fee, turnover ratio, age, cash ratio, fund's size at the same time for bond funds it was found that the key factors are the fund's sales charge, weighted average maturity, size, and existence of 12b-I fee.

2.1.5 Singh Jaspal and Chander Subhas(2004) in their paper titled An empirical analysis of perception of investors towards mutual funds had talked about the perception of investors towards mutual funds that crossed 1,20,000 crore mark by November 2002 and tried to identify the reasons for withdrawal or resentment in investing in mutual funds and found that daily disclosure of NAVs and provision for more tax rebates on investment in mutual funds have emerged as a prominent requirement for the investors and ineffectiveness of controlling bodies like SEBI is creating disillusionment among investors at the same time fund's under performance and inefficient management is discouraging investors in parking their money in mutual funds.

2.1.6 Kozup John, Howlett Elizabeth and Pagano Michael(2008) in their paper titled The Effects of Summary Information on Consumer Perceptions of Mutual Fund Characteristics talked about the impact of various disclosed information on the investor's perception of mutual funds by conducting experiments, multivariate and univariate analysis and found that while investors continue to place too much emphasis on prior performance, the provision of supplemental information, particularly in a graphical format, interacts with performance and investment knowledge to influence perceptions and evaluations of mutual funds.

2.1.7 Sehgal Sanjay, Sood G.S. and Rajput Namita (2009) in their paper titled Investor sentiment in India: a survey tried to examine the definitional aspect of investor sentiments and the key governors that influence investor sentiments by conducting a primary survey and found that regulatory framework and especially legal provision keep a strong bearing on investor confidence.

2.1.8 Saini Simaran, Dr. Anjum Bimal and Saini Ramandeep(2011) in their paper titled Investors' awareness and perception about mutual funds had talked about the perception of Indian investor in mutual funds and addressed many issues like investments in relation to investor's behavior and investors' opinion and perception about this investment avenue. The factors taken into considerations were type of mutual fund schemes, objectives of investing in mutual funds, role of financial advisors and brokers, sources of information and gaps in services delivered and promised. Researcher conducted primary survey and by applying chi square test and rankings on the collected

data and computing exponential growth rates found out that investors perceive brokers as much interested in their own benefits and at the same time mutual fund companies do not disclose all necessary information to investors at the same time SIP investments are gaining much more prominence as compared to other traditional modes of investments.

2.1.9 Wang Ya-Hui and Tsai Cing-Fen(2014) in their paper titled The relationship between brand image and purchase intention: evidence from award winning mutual funds talked about the relations ships and effects of brand image, perceived quality, perceived risk, perceived value, purchase intentions and demographic factors by conducting primary survey on 795 respondents from Taiwan and applied Likert's 7 point scale and structural equation modeling . Researcher found out that there are positive and direct effects among brand image, perceived quality, perceived value, and purchase intention. Brand image indeed increases investors purchase intentions. The purchase intention is affected mainly by perceived quality, not by perceived risk.

2.1.10 Eshraghi Arman and Taffler Richard(2012) in their paper titled Fund Manager Overconfidence and Investment Performance: Evidence from Mutual Funds tried to investigate impact of overconfidence and other associated behavioral biases on their investment performance by analyzing their narratives report over a period of 2003-2009 by using a range of proxies including over optimism, excessive certainty and excessive self-reference and found that superior past performance boosts managerial overconfidence and excessive overconfidence is associated, to a large extent, with diminished future investment returns in the 12 months following the publication of the annual report.

2.2 LITERATURE RELATED TO IMPACT OF EXTRANEOUS EVENTS ON CONFIDENCE OF INVESTORS

2.2.1 Daniel Kent, Hirshliefer David and Subhramanyam Avanidhar (1998) in their paper titled Investor psychology and security market under and over reaction proposed a theory under security market and over- reactions based on two psychological biases, investor's over confidence about their private information and biased self-attribution which results in asymmetric shifts in investor's confidence.

They found that over confidence implies negative long –lag autocorrelation, excess volatility, stock mispricing, public event based return predictability whereas in Biased self-attribution show short-lag positive auto correlation, short run earnings "drifts" but negative correlation between future returns and long term past stock market and accounting performance.

2.2.2 Barberis Nicholas Shleifer Andrei and Vishny Robert(1998) in their paper titled A model of investor sentiment presented parsimonious model of investor sentiments by incorporating psychological evidence and produces both over reaction and under reaction for wide range of parameter values.

2.2.3 Gervais Simon and Odean Terrance in their paper titled Learning to be over confident (2001) developed a multi period market model describing both the processes by which traders learn about their ability and how bias in this learning can create over confident traders and found that in early stages expected level of over confidence increases with and simultaneously people start realizing about their own abilities with more experience.

2.2.4 Statman Meir, Thorley Steven and Vorkink Keith in their paper titled Investor Overconfidence and Trading Volume (2003) had talked about over confidence hypothesis by taking trading volume as proxy and applied Vector auto regressive and Impulse response function in NYSE / AMEX shares and found that individual security trading activity is even more responsive to past shocks in the market-wide return, which is interpreted as evidence of the overconfidence hypothesis.

2.2.5 Baker Malcolm and Wurgler Jeffrey (2006) in their paper titled Investor sentiment and the cross-section of stock returns predicted the cross section of stock returns by applying Principal component analysis and correlation analysis and found that a wave of investor sentiment has larger effects on securities whose valuations are highly subjective and difficult to arbitrage. Consistent with this prediction, we find that when beginning-of-period proxies for sentiment are low, subsequent returns are relatively high for small stocks, young stocks, high volatility stocks, unprofitable stocks, non-dividend-paying stocks, extreme growth stocks, and distressed stocks. When sentiment is high, on the other hand, these categories of stock earn relatively low subsequent returns.

2.2.6 Bandopadhyaya Arindam and Johnes Anne Leah in their paper titled Measuring investor sentiment in equity markets (2006) developed investor sentiment index by publicly available data and demonstrated its use in price movements by applying the Persaud (1996) methodology and found that sentiment measure of is very efficient in explaining stock market change.

2.2.7 Bergman Nittai K. and Sugata Roychowdhury (2008) in their paper titled Investor Sentiment and Corporate Disclosure tried to examine the association between management earning forecast and consumer confidence by and found that there is an association between sentiments and biases in analyst's estimates of future earnings. Study also provides evidences that firms' long horizon disclosure choices reflect managers' desire to maintain optimistic earnings valuations.

2.2.8 Salma Zaiane and Abaoub Ezzeddine (2009) in their paper titled overconfidence and trading volume: evidence from an emergent market had talked about the impact of over confidence on trading volume and its role in the formation of excess volume in Tunisian stock market by using VAR model and Impulse response function and found that there is little evidence of the overconfidence hypothesis when volume traded used as a dummy.

2.2.9 Merkle Christoph (2013) in his paper titled Financial Overconfidence Over Time | Foresight, Hindsight, and Insight of Investors had talked about over confidence leading to higher trading activity , higher risk taking and less diversification and by surveying a brokerage clients online stock portfolio expectations were asked and derived some over confidence measure and by matching the responses with trading activities researcher found the influence of over placement on trading activity, of over precision and overestimation on degree of diversification, and of over precision and over placement on risk taking.

2.2.10 Meier Christoph (2016) in his paper titled Aggregate investor confidence in the stock market introduced a formal measure of overconfidence and found that in general when investor's confidence is high, the trading volume would be high particularly with reference to smaller stocks and thereafter small corrections will take place.

All these researches tried to formulate confidence index by considering price to earnings ratio (PER), Advance Declining ratios (ADRs), Put-Call ratios (PCR), Number of IPO (NIPO), PE ratios(PER). Turnover rates (TURN), Trading volumes (TV), mutual funds net flow (MFNF), Dividend premium, Closed–end fund discount and option implied volatility for stock market. Since there is no study available for construction of investors' confidence index for mutual funds researcher replaces these parameters with Mobilization of funds, Assets under management, Monthly returns, Gross domestic savings, Flow in equity market, Ratio of mutual funds to fixed deposit investments, Ratio of mutual fund investments to equity market.

2.2.11 Kurov Alexender (2010) in his paper titled Investor sentiment and the stock market's reaction to monetary policy had talked about impact of monetary policy on investor sentiments by applying investor intelligence survey and Baker and Wurgler's sentiment index as proxies and Markov switching models for calculating stock returns and found that t monetary policy actions in bear market periods have a larger effect on stocks that are more sensitive to changes in investor sentiment and credit market conditions. Overall, the results show that investor sentiment plays a significant role in the effect of monetary policy on the stock market.

2.2.12 Zouaoui Mohamed, Nouyrigat Genevieve and Beer Francisca (2011) in their paper titled How Does Investor Sentiment Affect Stock Market Crises? Evidence from Panel Data tried to gauge the impact of investor sentiment on financial crisis by developing leading indicator on the basis of data taken from 16 countries. Researcher used consumer confidence index as a proxy to investor confidence and applied logit/ probit models and CMAX as crisis indicator and found that sentimental impact is more pronounced for countries that culturally more prone to herd like behavior, over reaction and low institutional development.

Since these researches have been conducted on stock market thus researcher proposes to investigate following research question.

- Is there any impact of extraneous events on the confidence level of investors in mutual funds.

2.3 LITERATURE RELATED TO CONFIDENCE AFFECTING VARIOUS PARAMETERS

2.3.1 Schmeling Maik (2009) in his paper tilted Investor sentiment and stock returns: Some international evidence had talked about returns sensitivity with regard to investor sentiments by taking consumer confidence as proxy for investor sentiments from 18 countries and tried to predict the stock returns by applying panel unit root test, Grangner causality test, block exogenity test and long horizon return regression. Researcher found out that impact of sentiments on stock returns is higher for countries having less market integrity and which are prone to herd like behavior.

2.3.2 Naik Pramod Kumar and Padhi Puja (2015) in their paper titled Investor sentiment, stock market returns and volatility: evidence from National Stock Exchange of India had talked about the relationship between sentiments and stock returns volatility for a period since July 2001 to December 2013 period on the basis of monthly data from National stock exchange of India by applying OLS, VAR, Gragner causality and E Garch- M models and found that sentiments have negative impact on conditional volatility However, when the sentiment index is decomposed into positive sentiment and negative sentiment changes, the study reveals that positive and negative sentiments have asymmetric impacts on excess return volatility. The Granger causality results suggest a bi-directional causality between excess return and investor sentiment at the third lags.

2.3.3 Kale Suleyman and Akkaya Murat (2016) in their paper titled The Relation between Confidence Climate and Stock Returns: The Case of Turkey had talked about the relationship between consumer confidence and stock returns by taking consumer confidence, reel sector confidence and five stock indices for national and Michigan university sentiment index, VIX volatility index and GFK Germany Consumer Climate index for international effects. Researcher found no causality relation between consumer confidence and stock returns however stock returns positively affect the consumer confidence.

2.3.4 Robert J. Shiller (1998) in his paper titled Measuring Bubble expectations and Investor confidence presented the evidences on attitude changes among investors in the US stock market by conducting

primary survey on 400 respondents after every six months since 1989 to 1996 and derived a bubble expectation index, a negative bubble expectation index and an investors' confidence index.

2.3.5 Bollen Johan and Mao huina in their paper titled (2011) Twitter Mood as a Stock Market Predictor cited in Discovery Analytics October 2011 tried to predict stock market returns on the basis of individual sentiments gathered through Twitter by applying GPOMS which identifies six dimensions of mood viz. calm, alert, sure, vital, kind, and happy , Opinion finder, Gragner causality analysis , self- organizing fuzzy neural network and found that public mood as measured along GPOMS dimensions, especially calm which confirms the assumption of behavioral finance that emotions play a key role in financial markets.

2.3.6 Mr. Ghosh Bikramaditya (2015) in his Ph. D titled Developing Investor Confidence Index with a 360 Degree appraisal of macro-micro indicators –A Complete Study on BSE-100 along with select sectorial Indices through Primary & Secondary Analysis tried to develop a composite index of technical as well as sentiment based parameters and found that who follow technical partly & who follow technical completely both have week correlation with the market capitalization.

2.3.7 Ludvigson Sydney C. (2004) in their paper titled Consumer Confidence and Consumer Spending measured the consumer attitude and formulated an index by conducting primary survey and by using regression model tried to forecast the growth of various expenditures and found that to the extent that measures of consumer attitudes have genuine forecasting power for consumption, the explanation for such a relation remains unclear.

On the basis of literature cited above researcher proposes to investigate following research questions

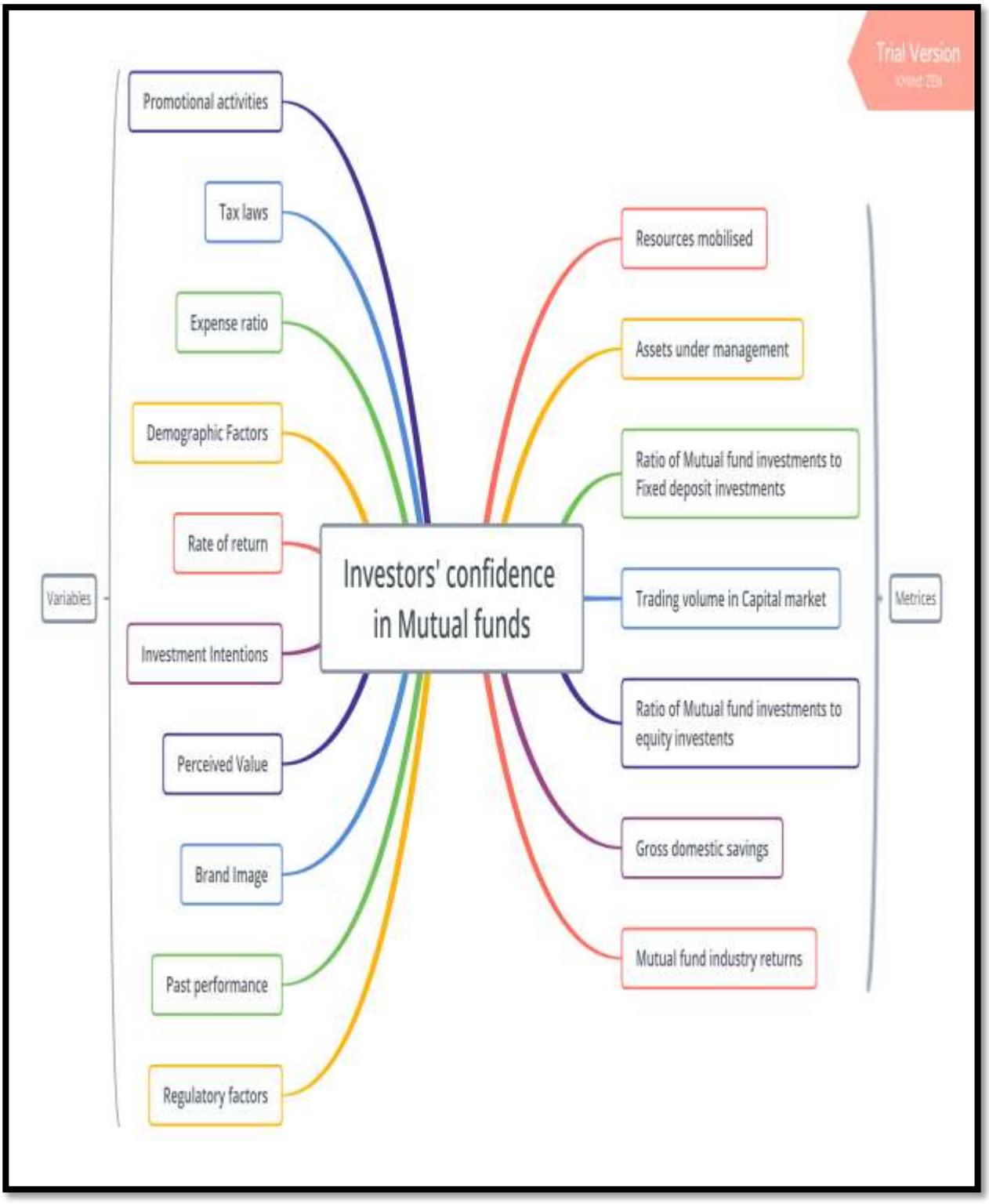
- Will there be any difference between constructed confidence index and Sensex?

2.4 RESEARCH GAP

After citing the relevant literature it can be said that researchers have already explored various dimensions of confidence index for stock market. There are many studies which not only construct the confidence index but also try to establish the relationship between constructed confidence index and various other indices. Few studies also try to evaluate the impact of various interventions on the confidence index at the same time

researchers try to predict the crisis on the basis of confidence index. But in all research papers it was seen that none of the researcher tried to evaluate the confidence index for mutual fund investors' as this sector is growing rapidly and investors showing their confidence because of its less risk and higher return characteristics so present study tries to make an attempt to bridge this gap by constructing a confidence index for mutual funds. This study not only constructs the index but also tries to evaluate the responsiveness of index to various extraneous events. To get the deeper insights this study also incorporates the primary survey of various fund managers so that a comprehensive study can be done.

2.5 CONCEPTUAL MODEL



Source; Researcher's own construct **Figure 1: Conceptual Model**

3. Background of study

"When you have confidence, you can have a lot of fun. And when you have fun, you can do amazing things."

Joe Namath

Above quote describes the essence of confidence in life. Whatever we do if we do it with confidence it leads to better results and as the degree of confidence goes down the quality of work decreases and when people lack confidence, it leads to disasters. When people lack confidence they start losing faith in their judgment which leads to delay in decision making due to which often people fail to exploit good opportunities. Worriers say that armies don't win with weapons and manpower but they win with confidence. In Mahabahrat whenever Arjun lost confidence Lord Krishna helped him gaining this confidence back either by preaching or by demonstrating which led to victory of Pandavas in that war. There are many other incidences where people just by showing confidence turned the game in their favor. Since confidence is so important in every walk of life, then finance cannot be untouched. In modern times, like every other decision, financial decision has its prominence and for taking such decisions confidence is required at each and every stage. Whether it is the stage of selection of an investment avenue or management of portfolio or protecting returns.

James Duesenberry (1949) proposed a theory on consumption function which says that people consume not only according to their income but also according to their surroundings which implies that people have tendency to follow or they get influenced by others. Various other marketing theories also confirm the same. If we wish to know why people follow the trend we can identify that that people gain confidence by looking at others following similar practices.

Money has always been a matter of great importance in human life. Many books have been written in ancient times like Arthshastra explaining the management of money and count of such literature is still increasing. As researches got intense, new uses of money came up and in modern era it will not be a hyperbole if we call money as a product. New investment avenues had come up where people started handling over their

money with a certain objective in their minds and in modern time we are witnessing such avenues in the form of banks, insurance companies, mutual funds, stock market and money market forex market etc.

Now question arises that if money is so precious to human then what makes them to give their money to such agencies, the answer to which lies in confidence. But if we observe closely it can be said that confidence is qualitative in nature, due to which many researchers have tried to quantify this by various techniques like Likert's scale etc. and constructing confidence index is one of the methods. This method is quite applicable when researchers are interested to know the confidence level over a period of time.

There are so many studies in the past where researchers have tried to construct confidence index for the stock market. But in recent time, the unprecedented growth in the mutual fund industry drew the attention of researcher and ignited the question that whether a confidence index based on sound principles can be constructed for mutual funds also?

Thus study is targeted at identifying the answers for such questions wherein, researcher proposes to construct confidence index for mutual fund industry. This will not only try to quantify confidence over a period of time but also will try to seek the explanation of the same and will be useful for asset management companies, investors and researchers.

4.1 NEED OF THE STUDY

This study is aimed at measuring investors' confidence in mutual fund industry. Lately mutual funds had gained prominence among all investment avenues because of their low risk and higher return characteristics as compared to the traditional mode of investments like fixed deposits, recurring deposits (low risk but low return) or investment in capital market (high returns but highest risk). A study is required to evaluate that whether this upsurge in the demand for mutual funds is on the basis of solid market principles or it is just a bubble which will burst in near future. Also it is of interest to evaluate the responsiveness of investor's confidence to any specific events taking place. As we all know that mutual fund is a derived fund which generates its returns on the basis of the performance of various assets in which money is invested and various securities in those asset classes (generally capital market).Thus it becomes necessary to know how this confidence shifts in line with the benchmark indices.

So it can be said that, this study is required to do a comprehensive evaluation of mutual fund industry from investors' point of view.

4.2 OBJECTIVES OF STUDY

1. To identify fund managers' perspective on the factors contributing to investors' confidence index.
2. To develop investor's confidence index in mutual funds using mutual fund sectorial parameters.
3. To find the relationship between Sensex and both confidence index.
4. To study the impact of any extraneous event during three years commencing since 2018 on the investor confidence.

4.3 HYPOTHESIS

$H_0$1: There is no significant difference between investors' confidence index for mutual funds and Sensex.

H_a1: There is significant difference between investors' confidence index for mutual funds and Sensex.

$H_0$2: There is no significant impact of extraneous events on the investors' confidence index of mutual funds.

H_a2: There is significant impact of extraneous events on the investors' confidence index for mutual funds.

4.4 PROSPECTIVE OUTCOMES OF STUDY

Present study emphasizes on the importance of constructing of investors' confidence index for mutual funds. In this research, researcher aims at evaluating investors' confidence towards mutual funds as an emerging investment avenue. This study is helpful for all asset management companies as it provides the insights into the confidence level of investors in reinvesting his/her money in mutual funds or other investment avenues in future. Thus this study will help the fund managers to decide their future course of action.

This study will also be useful for investors to form and strengthen their confidence by looking at this index that whether they should keep investing in mutual funds or they should start searching for new avenues. This index will not only strengthen the confidence of existing investors but will also try to get new investors on board to invest in mutual funds.

This study will further provide opportunities to researchers to explore new dimensions on the basis of index developed through this research.

5. RESEARCH METHODOLOGY

5.1 TYPE OF RESEARCH

This research is descriptive and analytical in nature because it tries to trace the investor's confidence based on secondary data and also try to evaluate the confidence of fund managers by primary data analysis over a period of two years commencing from 2018. This study also tries to evaluate the responsiveness of the index to various sudden shocks.

5.2 SCOPE OF STUDY:

Scope of this study is pan India.

5.3 SOURCES OF DATA:

Data will be collected from secondary sources.

5.3.1 **Primary Data:** Primary data would be collected from fund managers of various Asset management companies operating in India by the way of structured questionnaire. According to www.ibef.org 42 assets management companies are operating in India. Researcher proposes to collect primary data from 21 fund managers of various assets management companies as this sample size covers 50% of the total population thus it is the true representation of population. This data would be used to get the parameters ranked which contribute in confidence building of investors while investing in mutual funds for fulfillment of which researcher proposes to use weighted mean.

5.3.2 **Secondary Data:** Secondary data for the study will be collected through books, Journals, and website of BSE, NSE, AMFI, and websites of various asset management companies for the period of 2008 to 2018 on quarterly basis. Collected secondary data will help the researcher to construct the confidence index for mutual funds for which multiple regression model, principal component analysis would be used. Once the index will be constructed it will help the researcher to

check the coincidence of constructed index with Sensex by using Ordinary Least Square method. Constructed index on the basis of the secondary data will also be helpful to trace the impact of various economic shocks like Demonetization, implementation of Goods and Services tax and shooting up of oil prices etc. on investors' confidence index by using one of the various forecasting models like ARMA, ARIMA, Vector Auto regression etc. Various other tools like Augmented Dickey fuller test would be used to check the stationarity in the series.

5.4 DURATION OF STUDY

The duration of study would be for three years commencing from 2018. Secondary data will be collected on quarterly basis since 2008 to 2021.

5.5 TOOLS FOR ANALYSIS

5.5.1 Weighted Average mean: Researcher proposes to use weighted average mean to find out the average industry return. Weighted average mean is one of the methods of calculating mean under which elements in a series are assigned weights according to its relative importance. It can be calculated as

$$\bar{X}=\sum Wx/n$$

Where W= Weights assigned

X= Element of the series

N=Number of items in the series

5.5.2 Multiple Regressions: Multiple regression is a technique to understand the relationship between one dependent and various independent variables. The purpose of this technique is to find a linear equation that can best determine the value of dependent variable Y for different values independent variables in X.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_NX_N$$

Where Y is dependent variable b_1, b2, b3….. Are the slopes of regression line of Y against X_1, X_2, X_3. These values are then used to minimize the difference between actual and expected value of Y. Researcher proposes multiple regression to be used for regressing the variables like Assets under management (AUM), Gross domestic savings, Ratio of mutual funds investment to fixed deposits investment, Ratio of mutual fund investments to equity investments and trading volume etc. on identified macro- economic parameters like Industrial production index, rate of inflation, exchange rate etc. with an aim to classify rational and irrational components.

5.5.3 Principal Component analysis. **Principal component analysis** (**PCA**) is a statistical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables called principal components. PCA was invented in 1901 by Karl Pearson. PCA is mostly used as a tool in exploratory data analysis and for making predictive models. In present study, this technique would be used to extract the factor loadings for original sentiment proxy indicators.

5.5.4 Augmented Dickey Fuller test: In statistics and econometrics, an augmented Dickey–Fuller test (ADF) tests the null hypothesis that a unit root is present in a time series sample. The alternative hypothesis is different depending on which version of the test is used, but is usually stationarity or trend-stationarity. It is an augmented version of the Dickey–Fuller test for a larger and more complicated set of time series models**.** In this study ADF test will be used to trace the stationarity in various time series data and for the developed confidence index also. In this study will be used to trace the causal relationship between investors' confidence in returns.

5.5.5 ARIMA: In statistics and econometrics, and in particular in time series analysis, an autoregressive integrated moving average (ARIMA) model is a generalization of an autoregressive moving average (ARMA) model. Both of these models are fitted to time series data either to better understand the data or to predict future points in the series (forecasting). ARIMA models are applied in some cases where data show evidence of non-stationarity, where an initial differencing step (corresponding to the "integrated" part of the model) can be applied one or more times to eliminate

the non-stationarity. ARIMA model would be used to evaluate the impact of extraneous events on the confidence index.

5.5.6 Ordinary Least square: In statistics, ordinary least squares (OLS) is a type of linear least squares method for estimating the unknown parameters in a linear regression model. OLS chooses the parameters of a linear function of a set of explanatory variables by the principle of least squares: minimizing the sum of the squares of the differences between the observed dependent variable (values of the variable being predicted) in the given dataset and those predicted by the linear function. Geometrically, this is seen as the sum of the squared distances, parallel to the axis of the dependent variable, between each data point in the set and the corresponding point on the regression surface – the smaller the differences, the better the model fits the data. The resulting estimator can be expressed by a simple formula, especially in the case of a simple linear regression, in which there is a single regressor on the right side of the regression equation. IN this research researcher proposes to use this tool to find the relationship between both confidence indices and Sensex.

5.6 VARIABLES TO BE CONSIDERED:

There are various variables identified for the purpose of tracing investor's confidence

5.6.1 Mobilization of Funds: This has been considered as a variable because it explains the turnover rate from potential investors to investors of mutual funds.

5.6.2 Assets under management: This variable illustrates the volume of funds being hold by mutual fund industry which can be interpreted as one of the indicators of investor sentiment.

5.6.3 Quarterly returns: Returns are the best predictor of investor's confidence. If returns vary adversely it results in negative confidence and vice versa.

5.6.4 Gross domestic savings: Gross domestic savings explains the investor's over all confidence in economy and in investment

5.6.5 Flow in equity market. Flow in equity market again explains investor's interest in equity investments.

5.6.6 Ratio of mutual funds to fixed deposits investments: This ratio helps us to know the shift of common investors from fixed deposits to mutual funds.

5.6.7 Ratio of mutual funds investment to equity market: This ratio explains that how many investors chose mutual funds to invest in equity market rather than directly participating.

All these variables act as various parameters for tracing investor's confidence in mutual fund but it comprise various rational as well as irrational components. So to trace the element of irrationality researcher proposes

to regress these elements on identified macro- economic variables which researcher incorporate from the paper titled Investor Sentiment, Stock market returns and volatility: Evidence from National stock exchange India by Naik Pramod Kumar and Padhi Puja namely growth of industrial production index, the rate of inflation, exchange rate, short-term interest rate, term spread, risk free rate of return and net investment of foreign institutional investors.

5.7 PROCEDURE FOR CONSTRUCTION OF INDEX

The proposed index would be constructed by following steps mentioned

We have identified 7 matrices viz. Resources Mobilized, Assets under management, Ratio of mutual fund investments to fixed deposit investments, Trading volume in capital market, Ratio of Mutual Fund investments to equity investments, Gross domestic savings, Mutual fund industry returns. These would be regressed by 6 macro- economic parameters viz. Growth of industrial production index, the Rate of inflation, Exchange rate, Short-term interest rate, Term spread, Risk free rate of return and Net investment of foreign institutional investors. This process removes the business cycle variation from each of the seven sentiment proxies prior to the construction of final composite sentiment index (Baker and Wurgler, 2006). This leads to the estimation of the following equation:

$$Y_t = \alpha_0 + \beta_k \sum_{k=1}^{k} \text{Funda}_{kt} + \varepsilon_t \qquad (1)$$

Where *Yt* represents each of the market-related implicit sentiment proxies undertaken in the study, $\alpha 0$ is the constant, βk is the parameter to be estimated, Funda represents the aforementioned macroeconomic fundamentals, *K* represents the number of macroeconomic fundamentals, and εt is the error term.

The fitted values of equation (1) would provide the rational components, whereas the residuals capture the irrational component of sentiment. Researcher will then obtain the residual from equation (1) to have the orthogonal implicit sentiment proxies and used them in the subsequent analysis. After obtaining each of the

orthogonal sentiment proxy from equation (1) researcher will then construct a conglomerate market sentiment index to represent the aggregate investor sentiment employing the PCA. The PCA transforms the original set of variables into a smaller set of linear combinations that account for the most of the variance of the original set. The benefit of PCA is that it filters out idiosyncratic noise in the orthogonal sentiment measures and captures their common components. The aim here is to extract the factors loadings for our original sentiment proxy indicators. After obtaining the factor loadings for each orthogonal sentiment indicators a composite sentiment index will be constructed using the following formula.

$$\text{SentIndex}_t = \sum_{j=1}^{k} a_j \frac{Y_t}{\sigma Y_t} \qquad (2)$$

Where *aj* is the factor loadings for *j*-th item derived by the PCA, *K* is the number of sentiment proxies used, and *Yt* and σYt are the sentiment proxies and their standard deviation, respectively.

It is argued in literature that some proxies take longer time to reveal the sentiment. For this reason we follow the approach similar with Baker and Wurgler (2006) and estimate the PCA for our essential variables with levels as well as with their lags. In the spirit of Baker and Wurgler (2006) the final sentiment index will be constructed by adopting the following steps. First, a raw sentiment index will be calculated by using orthogonal sentiment proxies and their lags which will provide factor loading. Second, compute

the correlation coefficient between this first stage raw sentiment index and the seven orthogonal proxies and their lags. Finally, the variables with or without lags will be selected and then final sentiment index would be constructed[3]

5.8 EVALUATION TECHNIQUE FOR CONSTRUCTED CONFIDENCE INDEX

Index would be evaluated by constructing confidence index for training period commencing 2008 till 2018 and then validity of index would be confirmed by observing the index in testing period i.e. 2019-2021.

5.9 PROCEDURE FOR TRACING IMPACT OF EXTRANEOUS EVENTS

After constructing index by way of above stated method, impact of various economic shocks like demonetization, GST implementation and shooting up of the oil prices would be checked by observing the difference between forecasted values which will be calculated by applying one of the various forecasting models like ARMA, ARIMA, Vector Auto regression etc. and actual values of index.

5.10 PROPOSED CHAPTER PLAN

- Introduction
- Review of literature
- Background of study
- Research methodology
- Analysis and interpretation
    1. Variables contributing to investors' confidence in mutual funds.
    2. Construction of confidence index.
    3. Comparison of confidence index with Sensex.
    4. Impact of extraneous events.
- Findings and suggestions.

[3] Naik, P.K.& Padhi, P. (2016). Investor sentiment, stock market returns and volatility: evidence from National Stock Exchange of India. International Journal of Management Practice, 9(3), 213-237

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